AMENDMENTS TO THE CLAIMS

Listing of Claims:

1. (Currently Amended) A method of preparing an energy storage device for powering a downhole tool, comprising: heating an energy storage device to an effective temperature to improve operability of the energy storage device**, wherein the heat used to heat the energy storage device is a product of a non-electrically powered process or a byproduct of an electrically powered process.**

2. (Original) The method of claim 1, wherein the energy storage device comprises a primary battery, a secondary battery, a fuel cell, a capacitor, a heat engine, or combinations thereof.

3. (Original) The method of claim 1, wherein the effective temperature is greater than an ambient temperature in the wellbore near the energy storage device.

4. (Original) The method of claim 1, wherein the energy storage device is heated using a heat source.

5. (Original) The method of claim 4, wherein the heat source comprises a heater.

6. (Currently Amended) ~~The method of claim 5~~ **A method of preparing an energy storage device for powering a downhole tool, comprising: heating an energy storage device to an effective temperature to improve operability of the energy storage device, wherein the energy storage device is heated using a heat source, wherein the heat source comprises a heater, and** further comprising controlling the effective temperature with a feedback controller.

7. (Currently Amended) ~~The method of claim 5,~~ **A method of preparing an energy storage device for powering a downhole tool, comprising: heating an energy storage device to an effective temperature to improve operability of the energy storage device, wherein the energy storage device is heated using a heat source, wherein the heat source comprises a**

heater, and further comprising controlling the effective temperature with a pulse-width modulation controller.

8. (Original) The method of claim 4, wherein the heat source is positioned proximate the energy storage device.

9. (Original) The method of claim 4, wherein a thermal conductor extends between the heat source and the energy storage device.

10. (Original) The method of claim 4, wherein the heat source and the energy storage device are at least partially surrounded by a thermal insulator.

11. (Original) The method of claim 4, wherein the thermal insulator comprises a ceramic solid, ceramic fibers, a glass solid, glass fibers, a polymer solid, polymer fibers, a mineral solid, mineral fibers, a foamed polymer or epoxy, a metalized film, a Dewar flask, a silica aerogel, an air gap, combinations thereof, and nanostructured combinations thereof.

12. (Original) The method of claim 4, wherein the energy storage device is at least partially surrounded by an electrical insulator.

13. (Original) The method of claim 12, wherein the electrical insulator comprises a ceramic solid, ceramic fibers, a glass solid, glass fibers, a polymer solid, polymer fibers, a mineral solid, mineral fibers, a foamed polymer or epoxy, a Dewar flask, a silica aerogel, a dielectric powder, combinations thereof, and nanostructured combinations thereof.

14. (Original) The method of claim 4, wherein the heat source and the energy storage device are at least partially surrounded by an electrical insulator.

15. (Currently Amended) The method of claim 4, wherein the heat source comprises ~~an ohmic resistive~~ **a non-electrically powered** heater, a heat pump, a radioactive source, an exothermic reaction, a power generator, a downhole tool, a refrigeration system for cooling a downhole

component, a vortex tube, a converging nozzle for increasing a pressure of a gas, a heat transfer medium, the energy storage device itself, or combinations thereof.

16. (Original) The method of claim 1, wherein the energy storage device is heated by changing a temperature of a heat transfer medium positioned proximate the energy storage device, thereby causing the heat transfer medium to undergo a phase transformation such that it releases or absorbs heat.

17. (Original) The method of claim 16, wherein the heat transfer medium is cooled by lowering it downhole.

18. (Original) The method of claim 1, wherein the energy storage device is heated using heat generated by the discharge of the energy storage device.

19. (Original) The method of claim 18, wherein a heat transfer medium is used to regulate thermal loss from the energy storage device.

20. (Original) The method of claim 1, wherein the energy storage device is heated by an external heat source.

21. (Original) The method of claim 1, wherein the energy storage device comprises a fuel cell, and wherein the fuel cell is heated by pre-heating a reactant being supplied to the fuel cell.

22. (Original) The method of claim 21, wherein the reactant is pre-heated by heat exchange with the fuel cell.

23. (Original) The method of claim 21, wherein the reactant is pre-heated by heat generated by the fuel cell as the reactant passes through a feed line to the fuel cell.

24. (Original) The method of claim 23, wherein the feed line is at least partially surrounded by a thermal insulator.

25. (Original) The method of claim 23, wherein the fuel cell is at least partially surrounded by a thermal insulator.

26. (Original) The method of claim 23, wherein the feed line is positioned proximate an exhaust line exiting the fuel cell such that waste heat from the exhaust line heats the feed line.

27. (Original) The method of claim 26, wherein the exhaust exiting the fuel cell is contacted with a sorbent material to absorb the exhaust and thereby generate additional heat for heating the feed line.

28. (Original) The method of claim 23, wherein a thermal conductor extends between the fuel cell and the feed line.

29. (Original) The method of claim 21, wherein the reactant is pre-heated by a heater powered by the fuel cell.

30. (Original) The method of claim 29, wherein a thermal conductor extends between the heater and a feed line through which the reactant passes to the fuel cell.

31. (Original) The method of claim 30, wherein the feed line, the heater, and the thermal conductor are at least partially surrounded by a thermal insulator.

32. (Original) The method of claim 21, wherein the reactant is pre-heated by heat generated by a downhole tool powered by the fuel cell.

33. (Original) The method of claim 32, wherein a thermal conductor extends between electronics of the downhole tool and a feed line through which the reactant passes to the fuel cell.

34. (Original) The method of claim 1, wherein the energy storage device comprises a plurality of battery cells operably connected in an electrical series configuration or in an electrical parallel configuration.

35. (Original) The method of claim 1, wherein the energy storage device is heated by converting non-heat energy to heat energy.

36. (Original) The method of claim 35, wherein the energy comprises electromagnetic waves, a magnetic field, optical waves, acoustic waves, or combinations thereof.

37. (Original) The method of claim 35, wherein a device for generating the energy is lowered into the wellbore on a wireline, an electric line, or a conduit.

38. (Original) The method of claim 35, wherein the energy is conveyed from a surface of the earth.

39. (Original) The method of claim 1, wherein the energy storage device is positioned outside of a conduit disposed in the wellbore, and wherein a magnetic field is generated inside the casing to heat the energy storage device.

40. (Original) The method of claim 39, wherein the casing is conductive.

41. (Original) The method of claim 39, wherein a conductive material contacts the energy storage device.

42. (Original) The method of claim 1, further comprising cooling the energy storage device.

43. (Original) The method of claim 42, wherein a heat pump is used to perform both said heating and said cooling such that a temperature of the energy storage device is regulated to improve its operability.

44. (Original) The method of claim 1, wherein the energy storage device is located in an oilfield conduit.

45. (Original) The method of claim 1, wherein the energy storage device is located downhole.

46. (Currently Amended) A system for preparing an energy storage device for powering a downhole tool, comprising: the energy storage device and a heat source for heating the energy

storage device**, wherein the heat used to heat the energy storage device is a product of a non-electrically powered process or a byproduct of an electrically powered process**.

47. (Original) The system of claim 46, wherein the heat source is positioned proximate the energy storage device.

48. (Original) The system of claim 46, further comprising a thermal conductor extending between the heat source and the energy storage device.

49. (Original) The system of claim 46, further comprising a thermal insulator at least partially surrounding the heat source and the energy storage device.

50. (Original) The system of claim 46, further comprising an electrical insulator at least partially surrounding the energy storage device.

51. (Original) The system of claim 50, wherein the electrical insulator also at least partially surrounds the heat source.

52. (Original) The system of claim 46, wherein the heat source comprises a heater.

53. (Currently Amended) The system of claim 46, wherein the heat source comprises ~~an ohmic resistive~~ a non-electrically powered heater, a heat pump, a radioactive source, an exothermic reaction, a power generator, a downhole tool, a refrigeration system for cooling a downhole component, a vortex tube, a converging nozzle for increasing a pressure of a gas, a heat transfer medium, the energy storage device itself, heat energy formed from non-heat energy, or combinations thereof.

54. (Original) The system of claim 46, further comprising an electrical load operably connected to the energy storage device and the downhole tool.

55. (Original) The system of claim 46, wherein the energy storage device comprises a primary battery, a secondary battery, a fuel cell, a capacitor, a heat engine, or combinations thereof.

56. (New) A method of preparing an energy storage device for powering a downhole tool, comprising: heating an energy storage device to an effective temperature to improve operability of the energy storage device, wherein the energy storage device is heated using a heat source, wherein the heat source comprises a heater, and further comprising controlling the effective temperature with a feedforward controller, adaptive feedforward controller, analog controller, digital controller, or combinations thereof.